Affordable Assisted Living
Design and Construction
Considerations

SITE LOCATION

Regional centers/economies of scale
Topography: retaining walls
Environmental concerns: EPA, DNR, dumpsites
Zoning: Single-family zoning lowers cost. Propose legislative action to state that ALPs cannot be zoned out of a residential area
Access to utilities: streets, gutter, sidewalks, sewer, water lines

Access to amenities: shopping, transportation, services
Evaluate for known or probable sites for historic preservation: Office of State Archeology and State Historical Preservation Office (SHPO). Required if state/ federal funds utilized.
Core samples: Will soil structurally support the facility. Soil testing to determine compaction is essential. What is the depth to the water table level?

UTILITIES

Contiguous to all utilities: roads, cable, telephone, water, sewer, electric, gas
Flow test on water main to determine adequacy of pressure: contingency prior to purchase. Water pressure required for 13-R system (Fire sprinkler); 4" main and required water pressure.

ACCESSIBLE PARKING

Is frontage or street parking allowed?
If less than 10 spaces, no parking lot is required (IAC Chapter 18)
Zoning issue
Depends on funding source
No garages

TYPE OFCONSTRUCTION

Wood frame construction
Rural: One-story construction, no elevator
Urban: Multi-story construction, if possible two accessible levels; may be less expensive to have an elevator than purchase additional land – to be determined by topography and costs.

ENERGY CONSIDERATIONS

2' x 6' R-19 rated wall, R-38 roof/ceiling, R-8 ducts
Use exterior wrap
Address failures to seal both vertical and horizontal penetrations (i.e. floor and top plate joints, windows, doors, around light fixtures, switches, etc.)

Use proper flashing at doors and windows
Use low E or energy efficient windows and doors
Use sensor power lights for exterior of building
Use energy efficient appliances in common areas and apartments
Evaluate the long range and fixed costs to determine efficiency systems lifetime cost savings
Insulate ducts and seal joints with mastic
Insulate between individual units

HEATING VENTILATION AND AIR CONDITIONING

Central water heater system
Individual heater/AC units
Common system with separate thermostats
Geo-Thermal
Through wall AC
Thermostats with large numbers
Back up pump
Preventative maintenance

BASEMENT

No basement

UNIT AND COMMON AREA ROOM SIZE AND LAYOUT

Common kitchen
Individual units: half size refrigerators, microwaves, single bowl sinks
Multi-purpose dining, activity room
Limited common area

PRELIMINARY PLANNING PRIOR TO HIRING ARCHITECT OR ENGINEER

Local talent may not be experienced with State/Federal program requirements or type of construction

SLECTING AN ARCHITECT OR CONSTRUCTION FIRM THAT IS BONDED, INSUREDAND HAS REFERENCES

Look for firms with experience in low-income housing and assisted living in Iowa.
Find out if they have any plans “on the shelf,” previously developed plans that could be adapted to meet your program’s needs at lower design costs.
Negotiate on the percentage of the project costs that will go to the architect
Find out if they are registered with the state (which agency?) and are familiar with Iowa codes and rules
Check to see if they are a member of the American Institute of Architects and registered with the State Board of Architectural Examiners

Check references

PLANNING WITH ARCHITECT OR ENGINEER

Keep in mind the affordable nature of the project
Meet with DEA for a preliminary plan review
Keep copies of all correspondence and information related to the preliminary plan review
Check with community or county for zoning regulations
Make sure that the architect, developer, and state agencies all agree on the code that pertains to the development

TAKING BIDS OR NEGOTIATION OF CONSTRUCTION CONTRACTS (IF PERMITTED AND FEASIBLE)

a. Bid acceptance
b. Construction Contract
c. Pre-construction conference
d. Bonds
e. Insurance
f. Notice to proceed

CONSTRUCTION SCHEDULING

Pay special attention to planning and scheduling, be realistic
Begins at acquisition, ends at lease up
Work closely with architect and contractor to stay on schedule
Different funding sources can impact both scheduling and budget spending

ON SITE CONSTRUCTION MONITORING

Architect should do intermittent inspections, depending on the contract
Establish critical times such as footings, frame-in, etc. when the architect should inspect the project or as required by local building inspector

CHANGE ORDERS

Need to budget for these
Negotiate pricing structure for change orders at the beginning of the project. This is especially important if this is a conversion.
Don't accept bids that are too close to the intended budget
"Cost plus" concept could be used, depending on the cost of the overall project

EVALUATION OF CONSTRUCTION PHASES

a. **ORDERING OF MATERIALS AND HARDWARE**

Limited exterior improvements- i.e. brick, stone, etc.

b. **PERMITS, UTILITY HOOK-UP OR TAP FEES, TEMPORARY FACILITIES**

c. **SCHEDULING OF SUBCONTRACTORS' WORK ACTIVITIES**

d. **SITE WORK (PREPARATION) ROUGH GRADING**

e. **FOOTING AND FOUNDATION (WALKS, DRIVE, PARKING)**

f. **UTILITY ROUGH-INS, FLOOR AND ANCHORAGE**

g. **FLOORS, WALLS, CEILING, ROOF STRUCTURE**

Framing: 2" X 6" Studs 24" on center (O.C.): use siding, sheathing and wall that is rated for 24" spans:
Sheathing – oriented strand board (OSB) 8' dimension applied horizontal to the studs with staggered joints 4' O.C.
5/8" Drywall
Creating 24" modules could facilitate alternative use of space in future
(Interior walls that could be taken down) Unit size: 16' x 20' = 320 sq. ft.; 20' x 20' = 400 sq. ft., 20' x 24' = 480 sq. ft.
Two-stud corners: allows for better insulation
Need to utilize drywall clips for interior corners
Ladder blocking for partition intersection
Eliminate headers in non-bearing walls
Eliminate unnecessary cripple studs at windows
Insulated headers supported with metal hangers (no need for openings larger than 4'0")
Single top plate – align roof trusses directly over studs
Eliminate unnecessary building offsets
Clear span trusses – eliminates interior footings

h. **PLUMBING, ELECTRICAL, AND MECHANICAL INSTALLATIONS**

Plumbing: Some communities require cast iron below concrete slabs
Size up the vent stack exit pipe through roof- prevents freeze ups.
Plumbing not on exterior walls, caution if you do
Electrical: State does not require use of conduit – EMT
Can use romex unless there is a specific city or county code that requires otherwise
Fluorescent lighting
Arc Fault Circuit Interrupters (AFCIs) will be required in bedrooms as of January 2002. NEC

i. **SPRINKLER, FIRE ALARM, SMOKE DETECTION, STROBE INSTALLATIONS**

Proper install of sprinkler in the attic
Good planning on placement of fire extinguishers

j. **FINISHES**

Creative painting – Faux-finishes
Carpeting – flame spread less than 25, certified carpet in compliance with HUD (UM44d)
Durable vinyl composition tile

k. **FINISH GRADING AND LANDSCAPING**

ADA rules over this, max. 1" in 1' walks slope. Fall away from the building
Sod over seed. Rock perimeter beds with landscape fabric underneath prevent building damages
Trees and shrubs away from the building. Select easy to grow hardy perennials that come back every year.

PROGRESS INSPECTIONS

a. Pay-out inspections, required lien waivers
b. Punch list inspection
c. Final inspection, lien waivers and release of claimants
d. Warranty and equipment warranties
e. Retain age fee 10% release
f. Inspect footings, foundation, framing, flooring, etc.
g. Fire stopping around all wall penetrations and floors in multistory.
h. Someone on site to coordinate activities

Let the owner know they should hire a 3rd party inspector to oversee the project in an advisory role and not in a decision maker role.